

WHAT IS CLAIMED IS:

Sub B67¹_d

1. A receiver for receiving a multi-band signal modulated using an inverse discrete Fourier transform, comprising:
- 5 a plurality of demodulators, each demodulator for demodulating a respective one of a plurality of bands in the multi-band signal, wherein each demodulator includes a discrete Fourier transform.
2. The receiver of claim 1 wherein the process speed of each demodulator is determined by the respective frequency band.
3. The receiver of claim 1 wherein each demodulator further includes an equaliser connected to the output of the discrete Fourier transform.
- 15 4. The receiver of claim 1 wherein each demodulator further includes a filter for filtering the received signal prior to the discrete Fourier transform.
5. A transceiver including a receiver according to claim 1.
- 20 6. The transceiver of claim 5 in which each demodulator includes an echo canceller for removing an echo associated with a signal in a transmitter of the transceiver from the received signal.
- 25 7. The transceiver of claim 6 in which the echo canceller is connected to remove the echo at the input to the discrete Fourier transform.
8. The transceiver of claim 6 in which each echo canceller comprises an adaptive filter.

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[illegible]

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11 The receiver of claim 1 in which the multi-band signal is generated by
5 filtering the output of the modulator.

12.
13. The method of claim 12 wherein each demodulator further comprises an equalisation step.

15 ~~13~~ 14. The method of claim 12 wherein each demodulator filters the received signal prior to the discrete Fourier transform.

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15. The method of claim 12 in which the demodulating step is carried out in a transceiver.

20 15. The method of claim 15 in which each demodulator further performs an echo cancellation step to remove an echo associated with the signal in a transmitter of the transceiver from the received signal.

25 ~~16~~ 17. The method of any one of claims 12 to 16 in which the multi-band signal is generated by nulling selected tones in the modulator.

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18. The method of claim 12 in which the multi-band signal is generated by filtering the output of the modulator.

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